

Cumulative Review 4

Name _____ Date _____ Period _____

Factor the following polynomials.

1. $9x^2 - 9$

2. $a^2 - 4b^2$

3. $3x^3 + 24$

Solve the following equations. Show work!

4. $2(2x)^{\frac{1}{3}} + 1 = 5$

5. $\sqrt{4x - 23} - 3 = 2$

6. $x + 5 = \frac{14}{x}$

Simplify each expression. Show work!

7. $\frac{5}{x+1} - \frac{7}{x+2}$

8. $\frac{x+4}{x-3} - 6$

9. $\frac{3x^2 + 3x - 18}{x^2 + 3x - 4} \cdot \frac{x^2 - 6x + 5}{6x^2 - 42x + 60}$

10. $\frac{x^2 + 2x - 35}{25x^2 - 1} \div \frac{3x^2 + 24x + 21}{5x^2 - 9x - 2}$